Religious Differences in Child Vaccination in Ouagadougou, Burkina Faso

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Introduction

Religion can have an enormous effect on the health and survival of its adherents, whether by influencing the perceptions and attitudes toward disease, or by prescribing certain harmful practices (such as drinking, smoking, doing drugs, etc.) (Akoto, 1990). Émile Durkheim’s scientific study on suicide (1897) is considered the pioneering work on the epidemiological impact of religion, a topic which then became the subject of intense inquiry in the West, before, during and after the epidemiologic transition (Hummer et al, 1999; Van Poppel et al, 2002). These studies can be divided into those that analyzed various religious affiliations and their effect on health behaviors, morbidity and mortality (Van Poppel et al, 2002; Rasanen et al, 1996), and those that examine the relationship between different measures of religiosity (the degree of participation in religious beliefs and practices) and health outcomes (Hummer et al, 1999; Koenig et al, 1999; Oman et al, 2002; Strawbridge et al, 1997). Whatever their final measures, these studies succeeded in empirically demonstrating the important relationship between religion and health.

In developing countries in general and sub-Saharan Africa in particular, there is a dearth of scientific studies on the matter, even though the influence of religion may be more influential due the generally low levels of education among the population. Religion can be seen as a reflection of the diversity of lifestyles, practices and attitudes toward illness and health systems. Reluctance to vaccinate based on religious grounds, for example, have been reported in northern Nigeria (Kano, Zamfara, Kuduna) where in 2003, Muslim leaders called on parents to refuse to vaccinate children against polio, on the grounds that the vaccine may contain HIV or cause infertility (Jegede, 2007). In Kano, this boycott resulted in a 30% increase in the incidence of polio in 2004 (Jegede, 2007). The impact of religion on the perception of vaccination was also highlighted in a qualitative study in Benin among the leaders and adherents of Protestant sects, who expressed the belief that it is God himself who gives life, and that the only protection necessary against disease is divine protection (Fourn et al, 2009).

Such ideological barriers often stand in the way of the Expanded Programme on Immunization’s (EPI) goal to vaccinate all children, and of consequently achieving the fourth Millennium Development Goal: to reduce under 5 mortality rate by two thirds between 1990 and 2015. In order to improve the effectiveness of immunization programs, it is important to measure disparities in childhood immunization and understand the causes of these disparities, which is the aim of this paper. Our first objective is to examine the religious differences in child vaccination in Ouagadougou, the capital of Burkina Faso. Burkina Faso has been given a prominent place in the EPI (in place since 1980) as well as other international initiatives to increase the immunization of children. For example, in 1997, the country joined with its Sahelian neighbors to create the Initiative for Vaccine Independence, which seeks a long-term shift toward regional and country ownership of the EPI and works for the purchase of vaccines and supplies necessary for routine immunization (Ministry of Health, 2003).

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This study focuses on the city because, heretofore, very few studies have explored the religious health inequalities in urban areas. By focusing on the vaccination in Ouagadougou, this paper aims to test the specific applicability of two hypotheses regarding the mechanisms of action of religion on health. The first is the selectivity hypothesis, otherwise known as the characteristics hypothesis and the second is the particularized theology hypothesis, otherwise known as the lifestyle hypothesis or the theological doctrine hypothesis (Goldscheider and Mosher, 1988; Gyimah, 2007; Van Poppel et al, 2002). The selectivity hypothesis postulates that religious differences in mortality and health are tied to differences in access to social and human capital. The observed religious inequalities, thus, come from social and economic differences, and not from the religion itself. The particularized theology hypothesis, in contrast, descends from the work of Durkheim (1897) and considers religion as an institution of social control. This approach claims that, as a set of values and norms that govern beliefs and behaviors, religion exerts an influence independent of the socio-economic factors. This influence would certainly extend to the perception of illness, prevention and care utilization.

Data and Methods

The analyses are based on data collected by the Ouagadougou Health and Demographic Surveillance System (Ouaga HDSS), a research platform for studies and health interventions established in 2008 in five Ouagadougou neighborhoods (Rossier et al, 2012). After an initial survey conducted between October 2008 and March 2009, the population of the Ouaga HDSS has been interviewed in frequent rounds to register vital events (births, deaths), marriages and migrations. Three rounds have been fully completed to date, with an average periodicity of 10 months. As of May 2012, the population tracked by the Ouaga HDSS was estimated at 83,848 individuals.

Over the course of the fourth round (for which the field work took place between July 2011 and May 2012), investigators recorded information on vaccines received by children under 5 years of age, which allows us to evaluate the coverage of the EPI in the areas followed. The three dependent variables here are 1) full immunization, 2) full immunization before 12 months of age, and 3) full immunization before the age of 10 months. We use here the WHO’s definition of full immunization, which is when a child has received the BCG vaccine, the measles vaccine, three doses of the polio vaccine and three doses of the DTP vaccine (against diphtheria, tetanus and pertussis). The WHO recommends that a child receive all of these vaccines by the age of 12 months, while Burkina Faso country vaccine calendar recommends that these vaccines be given before the age of 10 months.

Independent variables include the religion of the child’s father and mother. A lack of data on attendance at places of worship requires us to consider only religious affiliation, even though a measure of religiosity would probably better capture the impact of religion on health behavior. As suggested by Lehrer (2004), however, religious affiliation in and of itself can induce differences in economic and demographic behavior. We code religion here into three main categories according to the main religions in Ouagadougou: Islam, Catholicism and Protestantism.

The socioeconomic characteristics of the parents and the demographic characteristics of the child are used as control variables. Given the binary nature of the dependent variables, logistic regression was used to test relationships.
Preliminary results show differences in the vaccination rates of children based on the religion of their parents. Compared to the children of Muslim parents (either mother or father), Catholics and Protestants are more likely to receive all vaccines, both in the time frame recommended by the WHO (before the age of 12 months) and within the immunization schedule in effect in Burkina Faso (before the age of 10 months). There are no significant differences between Protestants and Catholics. Even when control variables are taken into the consideration, the effect of religion on child vaccination remains, thus supporting the theological doctrine hypothesis.

An exploratory qualitative investigation with religious leaders and members of religious communities of the three main religions will investigate their various stances regarded health, disease and care-seeking.

References


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